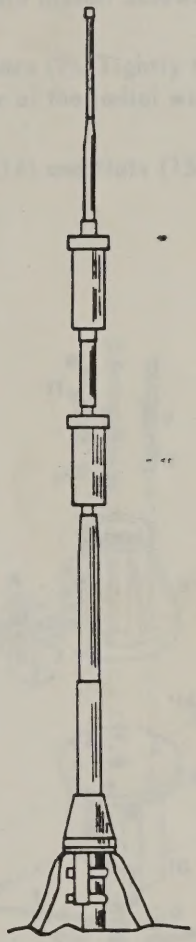
# ASSEMBLY 551262 INSTRUCTIONS MODEL RV-4C

## PARTS LIST FOR RV-4C

Caution has been taken to assure that all parts have been included - Check antenna parts against the list below - A box has been placed in front of each item for this purpose.

| PART NO. | ITEM | QUAN. | DESCRIPTION |
|---|---|---|---|
| 2489 | 1 | 1 | 75 ft. Wire. |
| 1235 | 2 | 4 | Insulators. |
| A-2342 | 3 | 1 | Connector Assembly. |
| 2281 | 4 | 1 | Ground Strap. |
| 2360 | 5 | 1 | VB-2B Base. |
| 1289 | 6 | 4 | #4 x 3/8" Screws. |
| 2362 | 7 | 2 | 5/16-18 x 1/2" Screws. |
| 1353 | 8 | 2 | 10-32 x 3/4" Screws. |
| 1004 | 9 | 14 | #10 Lockwashers. |
| 2339 | 10 | 1 | Casting. |
| 2304 | 11 | 4 | 10-32 x 1 1/4" Screws. |
| 1066 | 12 | 4 | 10-32 Hex Nuts. |
| 2340 | 13 | 2 | U-Bolts. |
| 1188 | 14 | 4 | 5/16" Lockwashers. |
| 1189 | 15 | 4 | 5/16-18 Hex Nuts. |
| 2341 | 16 | 1 | Element, 1 1/4" x 50 1/2". |
| 2343 | 17 | 1 | Element, 1 1/8" x 54" (one end swaged to 3/4" ID). |
| A-2345 | 18 | 1 | Trap, 10 & 15 meter. |
| 2421 | 19 | 1 | Element, 7/8" x 30 3/4". |
| A-2357 | 20 | 1 | Trap, 20 meter & shorted coil. |
| 2358 | 21 | 1 | Element, 5/8" x 46" (swaged one end). |
| 1486 | 22 | 1 | Element, 3/8" x 54" (tapped one end). |
| 1423 | 23 | 1 | 3/8" Protective Closure. |
| 1113 | 24 | 6 | #6 x 3/8" Screws. |
| 1487 | 25 | 1 | 5/16" Flat Washer. |
| 2359 | 26 | 5 | Top Hat Radials. |
| 1482 | 27 | 1 | 5/16-18 Screw. |
| 2367 | 28 | 1 | 2" Clamp. |
| 2374 | 29 | 1 | 8-32 x 1" Screw. |
| 2412 | 30 | 2 | #8 External Lockwashers. |
| 1199 | 31 | 1 | 8-32 Hex Nut. |
| 2368 | 32 | 1 | Element Section, Trap. |
| A-1123 | | 1 | Anti-Corrosive Compound. |



The high performance of your MOSLEY Antenna can only be achieved if assembled in accordance with the instructions supplied. Substitution of materials or modification of design will materially lessen this performance.

[ ] Place Ground Strap (4) on Base (5) and install Connector (3) so that wire goes into the center of the base. Loosely secure with screws (6).

[ ] Bend bottom of Ground Strap (4) to underneath side of Base (5). This tab will just clear the two base mounting holes for Screws (11). Tighten Screws (6). Loosely install Screws (7) and complete bending of the wire from the Connector (3) down into the base.

[ ] Align Ground Strap tab (4) with Casting (10) as shown. Loosely install Screws (8) and Lockwashers (9) through top of Base (5) and into Casting (10). Loosely install Screws (11), Lockwashers (9) and Nuts (12). Tighten Screws (8).

[ ] Place Radial Wire (1) around Screws (11) and between Lockwashers (9). Tightly twist the end of the radial wire 8 turns and solder. Tighten Nut (12). The order of the radial wires shown in Fig. 1 may be changed to suit your installation.

[ ] Loosely install U-Bolts (13) to Casting (10) with Lockwashers (14) and Nuts (15). Install the U-Bolts (13) around the supporting mast and tighten nuts.

## VERTICAL ELEMENT ASSEMBLY

(See Fig. 3 For Ground Mounting)

(See Fig. 4 For Above Gnd. Mtg.)

[ ] Telescope the unswaged end of Element (17) into the end of Element (16) having hole. Align holes and secure with Screw (24).

[ ] Telescope end of the SHORTEST TRAP ASSEMBLY (18) into swaged end of Element (17). Align holes and secure with Screw (24).

[ ] Telescope end of Element (19) having holes into Trap Assembly (18). Align holes and secure with Screw (24).

[ ] Telescope end of the LONGEST TRAP ASSY. (20) into Element (19). Align holes and secure with Screw (24).

[ ] For GROUND MOUNTING telescope the unswaged end of Element (21) into the tube of Trap Assembly (20). Align hole of Element (21) with hole closest to weather cap of Trap Assembly (20).

[ ] For ABOVE GROUND MOUNTING, several combinations of element length and top hat may be used depending on resonant frequency requirements on 40 meters.

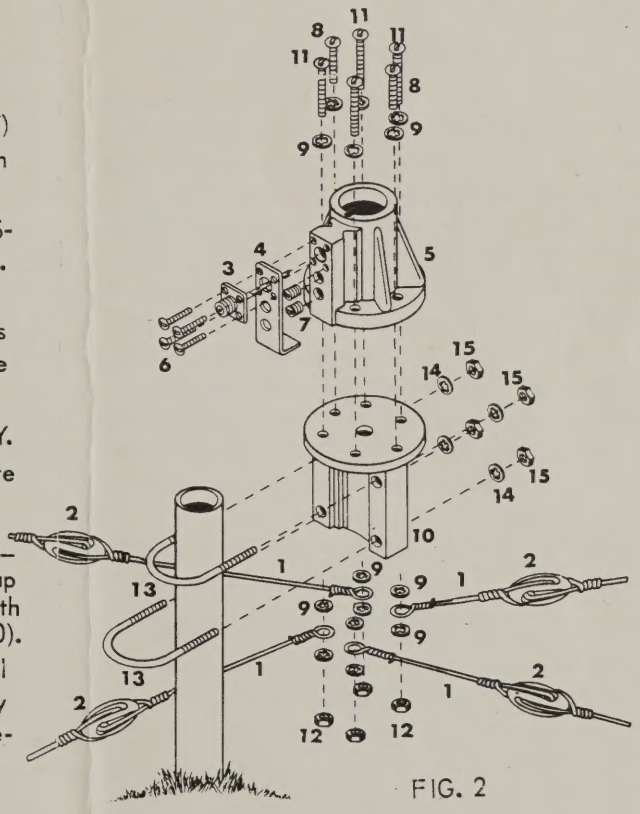
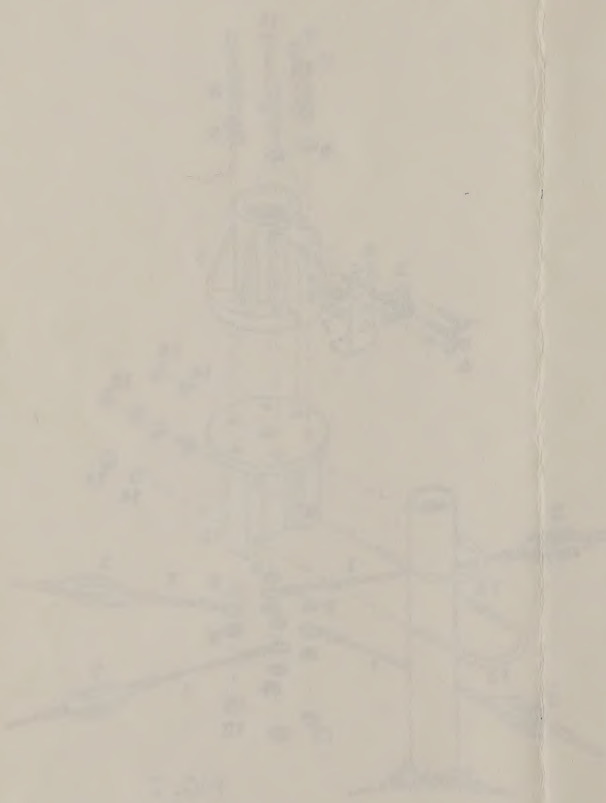



FIG. 2



# ASSEMBLY INSTRUCTIONS FOR RV-4C

Read and study the instructions before attempting assembly. Coat all telescoping tubes and points of electrical contact with Mosley Anti-Corrosive Compound (see package for instructions). The numbers appearing within brackets ( ) in text and numbers on drawings correspond with the item numbers of parts list. Boxes [ ] are provided for checking your progress of assembly. Before attempting assembly it should be decided whether the antenna is to be ground mounted or mounted above ground level.

## GROUND MOUNTING

When ground mounting the antenna, cut radials to the length shown in Fig. 1. It is advisable to cut these radials so that the minimum is as shown. (Allow extra for connecting to antenna base). Insulators are not used. It is advisable to bury the radials in the ground. In relatively dry soil it is recommended to bury the radials as deep as possible. In areas of good ground conductivity the radials may be replaced with a single 6 ft. ground rod. The mast support for ground installation should be at least 3 ft. long and 1¼ in. schedule 40 pipe size which is a common 1¼ in. pipe with an OD slightly greater than 1⅝ in. This pipe should be driven into the ground so that the pipe extends 6 in. above ground. For ground installation, assembly of the vertical element is shown in Fig. 3.

## ABOVE GROUND MOUNTING

For above ground installation of the antenna, the length of the radial becomes an important factor in the resonant frequency of the antenna. In this type of installation the frequency of resonances may be slightly raised or lowered by adjusting the length of the radial which operates on the band on which the frequency change is required. By lengthening the radial, the resonant frequency will be lowered. By shortening the radial, the frequency will be raised. The downward slope of the radial is to be held to a minimum. The further or greater the angle from horizontal the longer will be the radial requirements, therefore, the length given in Fig. 1 may change with each individual installation. For above ground installation, assembly of the vertical element is shown in Fig. 4. IT IS ADVISABLE THAT THE SUPPORTING MAST BE UNGROUNDED. The mast can be from 1¼ in. to 2 in. OD.

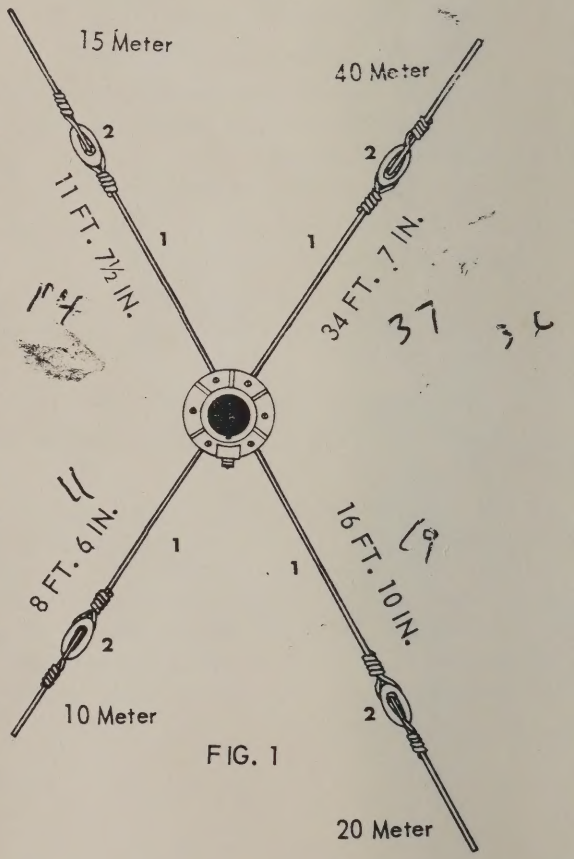


FIG. 1

## BASE ASSEMBLY (SEE FIG. 2)

[ ] Cut 4 radials (1) as shown in Fig. 1, allowing extra for tuning for above ground installation.

[ ] Slightly bend wire from Female Connector (3) so that connector may be placed into Base (5) without the wire hitting the far side.

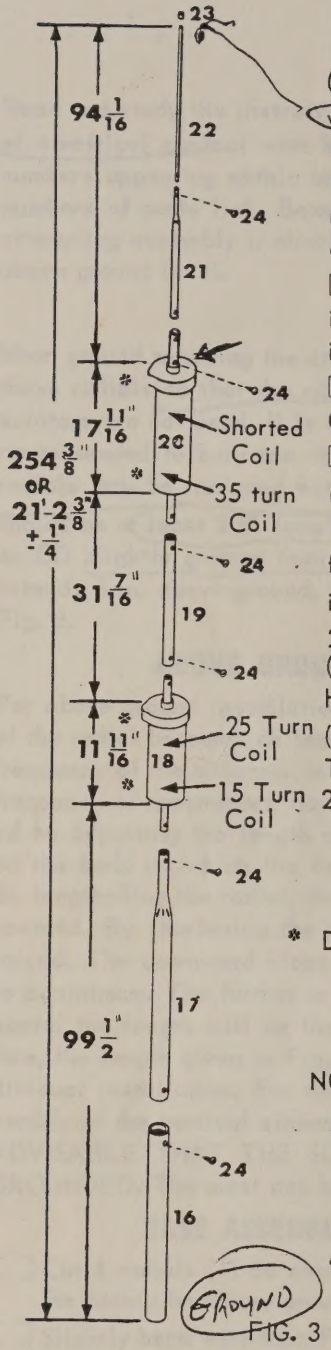



FIG. 3

(A) - For the low end of the band, telescope Element (21) into Trap Assembly (20). Align hole of (21) with hole of (20) that is farthest from the weather cap and install screw (24).

(B) - For general coverage, use the same setting as above.

(C) - For the high end of the band, assemble (21) and (20) as for ground mounting.

☐ Telescope end of Element (22) having hole, into swaged end of Element (21), align holes and install Screw (24).

☐ For GROUND MOUNTING install Protective Closure (23) on Element (22).

☐ For ABOVE GROUND MOUNTING:

(A) - For the low end of the band, install 3 Top Hat Radials cut to 8" long as in Fig. 4. More or fewer Top Hat Radials may be required depending on installation. Radial requirement is about 24 ft. 7 in.

(B) - For general coverage, DO NOT USE TOP HAT. Radial requirement is about 24 ft. 7 in.

(C) - For the high end of the band, DO NOT USE THE TOP HAT. The radial requirement is about 21 ft. 3 in.

* Dimensions taken to plastic coil form

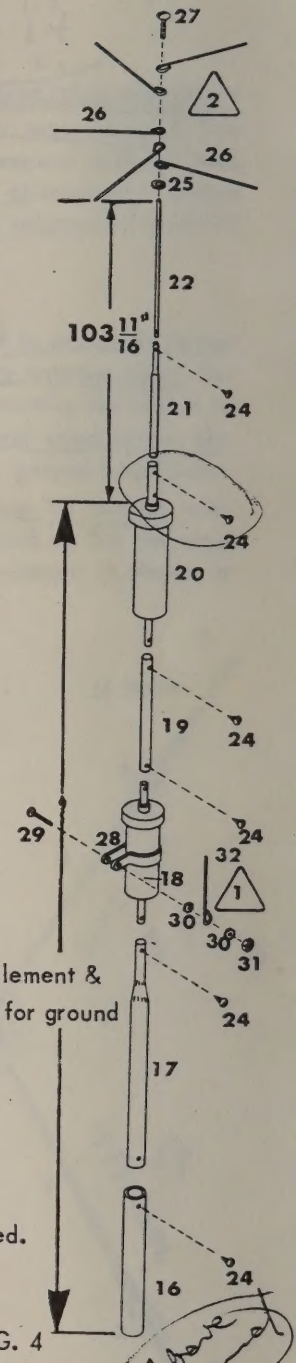



FIG. 4

Same dimensions, element & trap arrangement as for ground mount, See Fig. 3.

NOTES:

1. In some installations (above ground) it may be difficult to obtain resonance on 15 meters. Then install items (28, 29, 30, 31 & 32). Adjust position of (28) and radial length (1) for best combination.
2. All of radial elements (26) may not be required. Number and length are obtained empirically.

Mosley Electronics Inc

4610 North Lindbergh Blvd., Bridgeton, Missouri 63042

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